

Amendments to the Drawings:

Attached hereto are four replacement drawing sheets including Figs. 15-18. Figs. 15-18 have been amended to include the label --PRIOR ART--.

Attachment: Four (4) replacement drawing sheets

REMARKS/ARGUMENTS

Claims 1-5 are pending herein. Claim 1 has been amended as supported by Fig. 2 of the present application, for example. Claim 2 has been amended in light of the amendments made to claim 1. Claim 3 has been amended as supported by Fig. 7 of the present application, for example. Claims 4 and 5 have been amended to address matters of form. Applicants respectfully submit that no new matter has been added.

1. The Examiner objected to the disclosure on pages 2 and 3 of the Office Action. Applicants respectfully submit that the specification has been amended to include most of the changes suggested by the Examiner. The suggestion to add the phrase “Fig. 13” to the second and third paragraphs on page 19 of the specification has not been made since these paragraphs refer to Figs. 11 and 12 and are in proper sequence with the preceding paragraphs that also refer to Figs. 11 and 12. Additionally, the Examiner is respectfully requested to note that the specification has been further amended to recite that “in the drawings, the same or the similar numerical references refer to the same or similar elements” in a new paragraph immediately following the heading “DETAILED DESCRIPTION.” Accordingly, multiple references within the specification for the same numerical references are not needed with regard to each separate figure. For at least the foregoing reasons, reconsideration and withdrawal of the present objection are respectfully requested.

2. The objection to the drawings is noted, but deemed moot in view of the replacement drawing sheets of Figs. 15-18 submitted above. Accordingly, reconsideration and withdrawal of the present objection are respectfully requested.

3. The rejection of claims 1-5 under §112, second paragraph is noted, but deemed moot in view of the rewritten claims submitted above. Accordingly, reconsideration and withdrawal of the present rejection are respectfully requested.

4. Claim 1 was rejected under §102(b) over Waterman, Kim or Hampel. To the extent that this rejection may be applied against the amended claims, it is respectfully traversed.

Claim 1 recites a variable delay line comprising a hybrid coupler having, among other things, first and second output terminals, an isolation terminal, and first and second reactance parts connected respectively to the first and second output terminals. Claim 1 has been amended to clarify that the first and second reactance parts comprise first and second variable-reactance devices and first and second resonant circuits, respectively. Each of the resonant circuits is connected between the respective variable-reactance device and a common ground, and the variable-reactance devices have substantially the same reactance.

Waterman discloses, in the Abstract, a phase skewer relating to a field of microwave transmission that aligns the phase of signals at radiating elements of a series fed antenna. Because Waterman has a microwave antenna, there appears to be no isolation terminal for outputting a reflected signal based on the first and second output signals. Further, there is no disclosure or suggestion within Waterman that the alleged first and second reactance parts have variable-reactance devices or first and second resonant circuits. Therefore, Waterman fails to disclose or suggest a variable delay line comprising an isolation terminal, first and second variable-reactance devices and first and second resonant circuits, as recited in claim 1.

Kim discloses, in Fig. 6, the inclusion of varactor diodes 31, 32 (variable-reactance devices) attached to the output terminals 35, 36 of the signal generator and to ground. Kim, however, does not disclose or suggest the inclusion of resonant

circuits, such as a dielectric resonator, connected between each of the varactor diodes and a common ground. Therefore, Kim fails to disclose or suggest a variable delay line comprising first and second reactant parts comprising first and second variable-reactance devices and first and second resonant circuits, respectively, each of the resonant circuits being connected between the respective variable-reactance device and the common ground, as recited in claim 1.

Hampel discloses, in Figs. 9A and 9C, a phase shifter for radio frequencies having alleged reactance parts, which are electrically connected to a common sledge 980, which allegedly function as variable-reactance devices. Hampel in no way discloses or suggests the inclusion of resonant circuits connected between the alleged variable-reactance devices and a common ground. Therefore, Hampel fails to disclose or suggest a variable delay line comprising first and second reactance parts comprising first and second variable-reactance devices and first and second resonant circuits, respectively, each of the resonant circuits being connected between the respective variable-reactance device and a common ground, as recited in claim 1.

For at least the foregoing reasons, Applicants respectfully submit that Waterman, Kim, and Hampel all fail to disclose or suggest a variable delay line as recited in claim 1. Accordingly, reconsideration and withdrawal of the present rejection are respectfully requested.

5. Claims 1 and 2 were rejected under §103(a) over JP ‘703 in view of Kim. To the extent that this rejection may be applied against the amended claims, it is respectfully traversed.

JP ‘703 discloses, in Fig. 13, the inclusion of a circuit 9 containing an inductor 7 and a capacitor 8 arranged in parallel. JP ‘703 further discloses, in Fig. 13, the inclusion in series with the circuit 9, a capacitor 10 and another circuit containing a field-effect transistor 11 and a capacitor 16 in parallel with one another. The

Examiner asserts, on page 7, lines 16-18, that Kim is being used solely for its alleged disclosure of applying a common DC voltage to each variable-reactance circuit. However, similar to Kim, JP '703 does not disclose or suggest the inclusion of first and second reactance circuits mounted between the first and second variable-capacitance devices and a common ground.

For at least the foregoing reasons, a combination of JP '703 and Kim fail to disclose or suggest a variable delay line comprising first and second reactance parts comprising first and second variable-reactance devices and first and second resonant circuits, respectively, each of the resonant circuits being connected between the respective variable-reactance device and a common ground, as recited in claim 1. Since claim 2 depends directly from claim 1, claim 2 is also believed to be allowable over the applied prior art. Accordingly, reconsideration and withdrawal of the present rejection are respectfully requested.

6. Claim 4 was rejected under §103(a) over JP '703 and Kim, and further in view of Matsumoto. Applicants respectfully submit that the arguments submitted above distinguish claims 1 and 2 from JP '703 and Kim. Since Matsumoto does not overcome the deficiencies of JP '703 and Kim, and since claim 4 depends indirectly from claim 1, claim 4 is also believed to be allowable over the applied prior art. Accordingly, reconsideration and withdrawal of the present rejection are respectfully requested.

The Examiner is respectfully requested to note that claims 3 and 5 were not addressed in the present Office Action. Accordingly, it is believed that claims 3 and 5 are allowable. If this is not the case, and if the PTO decides to assert a rejection against either of claims 3 or 5 in the next PTO paper, that rejection cannot, of course, be made final.

For at least the foregoing reasons, Applicants respectfully submit that all pending claims herein define patentable subject matter over the art of record. Accordingly, the Examiner is requested to issue a Notice of Allowance for this application in due course.

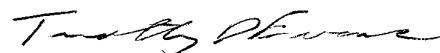
If the Examiner believes that contact with Applicants' attorney would be advantageous toward the disposition of this case, the Examiner is herein requested to call Applicants' attorney at the phone number noted below.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1446.

Respectfully submitted,

May 7, 2007

Date



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